



## Asteroid mission not yet "near" an end

**N**ASA's NEAR Shoemaker spacecraft, the first spacecraft to touch down and operate on the surface of an asteroid, will not be immediately shut down after all.

The mission will be extended for up to 10 days to gather data from a scientific instrument that could provide unprecedented information about the surface and subsurface composition of the asteroid Eros.

Two days after touchdown, NEAR Shoemaker is still in communication with the NEAR team at the Johns Hopkins University Applied Physics Laboratory (APL) in Laurel, Md.

*See NEAR on page 3*

## Qualification testing on X-33 flight engines under way at Stennis

**Q**ualification test firings of the unique engines designed to propel America's X-33 space plane into high-speed, suborbital flight in 2003 began Feb. 5 at Stennis Space Center in Bay St. Louis, Miss.

The ignition test went the full scheduled duration of 1.1 seconds with no observed anomalies.

Initial tandem test firings of the XRS-2200 Linear

*See X-33 on page 5*

## Marshall passes ISO 9001 audit

**T**he Marshall Center passed its surveillance audit with only one minor nonconformance last week, and has been recommended by National Quality Assurance for continued registration to ISO 9001.

For the next three years, a surveillance audit will be performed every six months to ensure the Marshall Center maintains the certification requirements.

Results of last week's audit are: 0 Major Findings, 1 Minor Finding, 0 Observations and 0 Carryover Findings. Results from the audit report will be posted on the ISO 9000 Web site.

"I would like to commend and thank each Marshall employee who supported this highly successful effort that contributed to Marshall maintaining its ISO 9001 certification," said Center Director Art Stephenson. "Everyone did an outstanding job in the preparation for the audit. Due to the success and benefits of ISO at Marshall, our goal is to be fully registered to ISO 9001 by November. I look forward to working with you to meet this goal."



Photo by Dennis Olive, NASA/Marshall Space Flight Center

### Touring the test bed

From left, astronauts Edd Lu, Franklin Chang-Diaz and John Young tour the Safe Affordable Fission Engine of the Experimental Test Bed Programs in Bldg. 4776 recently at the Marshall Center. Young also is the associate director (technical) at Johnson Space Flight Center in Houston, Texas.

## President Bush challenges Americans to remember

In 1915, Carter Godwin Woodson, the father of Black history, founded the Association for the Study of African-American Life and History. Each February, the Association proposes a theme to guide the celebration of National African-American History Month. For this year, the association has chosen "Creating and Defining the African-American Community: Family, Church, Politics and Culture."

This month in particular, we remember the stories of those who have helped to build our Nation and advance the cause of freedom and civil rights. We remember the bravery of the soldiers of the 54th Massachusetts Infantry Regiment and the sailors of the USS Mason in service to our country. We remember those who marched on Washington, sat at whites-only lunch counters, and walked rather than use segregated buses. And we remember those, known only to each of us, who helped to build our families, places of worship and communities.

When we examine our nation's history, we discover these and countless other stories that inspire us. They are stories of the triumph of the human spirit, tragic stories of cruelty rooted in ignorance and bigotry, yet stories of everyday people rising above their circumstances and the prejudice of others to build lives of dignity.

This month, and throughout the year, let us celebrate and remember these stories, which reflect the history of African-Americans and all Americans. We can all enjoy the works of writers like Paul Laurence Dunbar, James Weldon Johnson, Zora Neale Hurston and Langston Hughes. In our nation's schools, our children can learn to admire Booker T. Washington, Sojourner Truth, Frederick Douglass and others. And Americans from all backgrounds can be ennobled by the examples of Thurgood Marshall, Roy Wilkins, Whitney Young, Mary Church Terrell and other civil rights leaders.

As we celebrate African-American History Month, let us commit ourselves to raising awareness and appreciation of

African-American history. Let us teach our children, and all Americans, to rise above brutality and bigotry and to be champions of liberty, human dignity and equality. And let us rededicate ourselves to affirming the promise of our Constitution.

NOW, THEREFORE, I, GEORGE W. BUSH, President of the United States of America, by virtue of the authority vested in me by the Constitution and laws of the United States, do hereby proclaim February 2001 as National African-American History Month. I call upon public officials, educators, librarians and all of the people of the United States to observe this month with appropriate ceremonies, activities and programs.

IN WITNESS WHEREOF, I have hereunto set my hand this first day of February, in the year of our Lord two thousand one, and of the Independence of the United States of America the two hundred and twenty-fifth.

— *George W. Bush*

### Marshall Black History Month Events

Feb. 21 — Science fair, 8:30 a.m., Bldg. 4203 cafeteria

Feb. 22 — Jazz Café, 11:15 a.m.-12:15 p.m., Bldg. 4203 cafeteria

Feb. 27 — Outreach program at Stone Middle School, Huntsville

Feb. 28 — Closing ceremonies, 9 a.m., Morris Auditorium

## NEAR

*Continued from page 1*

Earlier this week, the team sent commands to NEAR and guided the robotic researcher to a 4-miles-per-hour touchdown on a rock-strewn plain on the asteroid. The spacecraft gently hit the surface at 2:02 p.m. CST, after a journey of 2 billion miles, and a full year in orbit, around the large space rock.

On Tuesday, the NEAR mission operations team decided against another engine firing that could have lifted the

space probe off the asteroid's surface. There were initial concerns that it might be necessary to adjust the spacecraft's orientation in order to receive telemetry from the ground. However, NEAR Shoemaker landed with a favorable orientation, and there is no problem with receiving information. Mission managers have decided it is not necessary to move the spacecraft from its resting place on the surface of Eros.

The spacecraft spent the last year in a

close-orbit study of asteroid 433 Eros, a near-Earth asteroid that is currently 196 million miles from Earth. During that time it collected 10 times more data than originally planned and completed all its science goals before its descent to the asteroid.

Funding for the mission extension will come from the NEAR project.

For more information, visit the Web at: <http://nssdc.gsfc.nasa.gov/planetary/near.html>

# Annual Great Moonbuggy Race set April 6-7

**T**he eighth annual Great Moonbuggy Race will be April 6-7 at the U.S. Space & Rocket Center.

The competition requires students to design a vehicle and in the process, confront real-world engineering problems. The challenges introduce them to those faced by the NASA team that designed the Lunar Rover Vehicle for Apollo astronauts to travel on the Moon. The challenge continues when students race their vehicles over a half-mile simulated lunar terrain, to encounter man-made craters, rocks, ridges and soft soil.

High school students race Friday, April 6, and college students race Saturday, April

7. Teams from 20 states and Puerto Rico will compete. Prizes are awarded not only for the fastest vehicles, but also to the team whose design represents the best technical approach toward solving the engineering problem of navigating the simulated lunar surface.

Volunteers are needed at 8 a.m. or noon April 6 and 7. To volunteer, send an e-mail to Joel Farbman or call 544-2319. More information about the competition is available on the Marshall Center's Great Moonbuggy Race Web site at: <http://moonbuggy.msfc.nasa.gov>



The College of New Jersey team races past the Saturn V model during last year's race.

## X-33

*Continued from page 1*

Aerospike engines will be short bursts such as this, eventually leading to durations required to send the unpiloted vehicle from a launch pad in California to landings in either Utah or Montana.

The engines will power the Marshall-managed X-33, a half-scale, sub-orbital flight demonstrator of technology required for a reusable launch vehicle.

"Initial indications are all test objectives were met in this first test of the flight engines," said Mike McKeon, program manager for the XRS-2200 aerospike engine at the Rocketdyne Propulsion & Power business of The Boeing Company. "We are now reviewing the data and preparing to move into longer duration testing."

"I'm excited about beginning this phase of testing," said Dr. Don Chenevert, NASA's X-33 project manager at Stennis. "I'm confident the remainder of dual-engine testing will perform equally as well as this initial ignition test."

Eight more test firings of the twin flight engines are planned at Stennis before they are delivered to Lockheed Martin's X-33 assembly facility in Palmdale, Calif.

Fourteen single-engine test firings of a development configuration of the unique Aerospike engine were successfully completed at Stennis Space Center in May 2000.

Boeing Rocketdyne developed the XRS-2200 Aerospike engine at its Canoga Park, Calif., facility. Final engine assembly was done by the NASA/Boeing Rocketdyne team at Stennis Space Center.

The X-33 project is being developed under a cooperative agreement between NASA and Lockheed Martin Space Systems Company, Denver, Colo.

## Sports

### Softball kickoff

**T**he softball season kickoff meeting will be 11 a.m. March 7 in Bldg. 4752. For more information, call Stan Fuller, president of the softball club, at 544-1508.

### Tennis club

**T**he MARS Tennis Club's annual membership drive is under way and continues through March 12. A welcome letter and renewal membership form will be e-mailed to current members. Anyone interested in joining the club may download the form from the Inside Marshall MTC Web site at: <http://inside.msfc.nasa.gov/MARS/clubs.html#tennis>

## Obituaries

**Hirschler, Otto Heinrich, 87**, of Huntsville died Feb. 2. He was one of the original von Braun German rocket scientists brought to the United States at the end of World War II. He helped develop the missile program at Redstone Arsenal and was a member of the team that was instrumental in launching the first unmanned and manned space launches. Survivors include one daughter, Elke Hodgins of Merritt Island, Fla.; five sons, Gunter Hirschler of Atlanta, and Wolf Hirschler, John Hirschler, Ed Hirschler and Hartmut Hirschler of Huntsville.

**Johanson, Walter A., 75**, of Huntsville, died Feb. 5. He retired from Marshall in 1989 where he worked as an aerospace engineer.

**Sanders, Grover H., 77**, of Toney, died Feb. 8. He retired from Marshall in 1970 where he worked as a materials treatment inspector.



Photo by Terry Leibold, NASA/Marshall Space Flight Center

### ***Smelser honored***

At a recent Procurement Office awards ceremony, Jerry Smelser, right, was presented the award for Contracting Officer's Technical Representative of the Year. Smelser is the project manager for the Space Shuttle External Tank contract. Congratulating Smelser is Steve Beale, director of the Procurement Office.

## **Severe Weather Awareness Week Feb. 19-23**

# **Marshall's EOC keeps employees informed in severe weather**

**W**hen severe weather is forecast for our area, the Marshall Emergency Operations Center (EOC), located in Bldg. 4202, room B104, begins to closely monitor weather conditions.

During severe weather, personnel should be alert for announcements over the Emergency Warning System, which is used to announce severe thunderstorm watches/warnings, tornado watches/warnings/sightings, and cancellations of severe weather.

When emergency announcements are made, all personnel are advised to follow instructions and take action as follows:

### **Severe thunderstorm warning**

- When directed, personnel in trailers and buildings with remote protective areas or conducting outdoor activities should evacuate to protective areas.
- All other personnel should close windows, blinds and exterior doors, and remain alert for possible evacuation to protective areas.
- If in a protective area, be alert for additional announcements.

### **Tornado watch**

- Close exterior doors, windows and blinds.
- Be alert for additional announcements.

### **Tornado warning**

- Close exterior doors, windows and blinds (unless previously performed).
- When directed, personnel in trailers and buildings with remote protective areas or conducting outdoor activities should evacuate to protective areas immediately.
- Be alert for additional announcements.

### **Tornado sighting**

- Evacuate immediately to a protective area and close exterior doors and hallway doors as you leave your area.
- Remain in protective area and be alert for additional announcements.

### **Cancellation of severe weather**

- Return to your workstation and resume normal operations.

Emergency Plans are posted near facility entrances and in elevator lobbies of multiple-story buildings. You should be familiar with the plan in your building and familiarize yourself with the plans in other buildings as you enter, especially if there is a chance of severe weather occurring that day.

For more information, call Cathy Miller at 544-5187, or Dan Crock at 544-9194.

## Center Announcements

### ***FIRST Robotic competition***

The Marshall Center is sponsoring three high school teams in this year's For Inspiration and Recognition of Science and Technology (FIRST) robotics competition. Student teams from Arab High School, Lincoln County Tennessee High School in Fayetteville, and Lee High School in Huntsville — co-sponsored by The Boeing Co., — plus a team from Bob Jones High School — being sponsored by Daimler-Chrysler — will be in Bldg. 4619 at 2 p.m. Thursday to see what the real competition will be like.

### ***Student Involvement Program***

NASA's Student Involvement Program is a one-day competition coming to Marshall Feb. 21. It involves students from schools within Marshall's six-state region of responsibility. Marshall volunteers are needed as judges for this competition. Interested scientists, engineers, educators and journalists should send an e-mail to Alicia Beam. For more information, call 544-2849.

### ***NASA CONNECT***

The NASA CONNECT instructional video, "Patterns, Functions and Algebra: Wired for Space," is scheduled to air Centerwide at 11:30 a.m. Feb. 22. The show features magnetic levitation research and the Propulsive Small Expendable Deployer System (ProSEDS) experiment and Marshall physicist, Les Johnson, and ProSEDS program manager, Leslie Curtis. This episode of NASA CONNECT is funded by the Space Transportation Directorate, managed by the Education Programs Department and produced by Marshall TV.

### ***AIAA Conference***

The American Institute of Aeronautics and Astronautics (AIAA) is sponsoring the 20th Digital Avionics Systems Conference Space — Aviation's Next Frontier — at the Plaza Resort and Spa, Oct. 14-18 in Daytona Beach, Fla. This is also a call for participation: papers,

tutorials and exhibits. To participate, send e-mail to Delisa Wilkerson or call 544-4967.

### **Clubs and Meetings**

#### ***AIAA lecture on Challenger***

Allan J. McDonald of Thiokol Propulsion will speak at the American Institute of Aeronautics and Astronautics (AIAA) dinner at 6:30 p.m. March 7 at the Redstone Officers' and Civilians' Club. McDonald, director of the Space Shuttle Solid Rocket Motor project at the time of the Challenger accident, will discuss lessons learned. Cost is \$18 or \$10 for full-time students. For reservations, call Alan Lowrey at (256) 461-4398.

#### ***Genealogical society meets***

The Huntsville Genealogical Computing Society will meet at 7 p.m. Feb. 19 in the auditorium of the Huntsville-Madison County Main Library. Mark Hubbs, an historian from Madison, will give a talk on the clothing worn by Americans in the early 1800s.

#### ***Shuttle Buddies***

The Shuttle Buddies will meet for breakfast at 9 a.m. Feb. 26 at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 881-7757 or Gail Wynn at 852-8189.

#### ***Bolero lessons***

Bolero lessons will be given Feb. 19 and 26 in the Parish Hall of St. Stephen's Episcopal Church at 8020 Whitesburg Dr. Intermediate classes will be from 7-8 p.m. and beginner classes from 8-9 p.m. Lessons cost \$6 per person per night. For more information, call Woody Bombara at 650-0200.

#### ***Breast cancer fashion show***

The 6<sup>th</sup> Annual Designers Against Breast Cancer Fashion Show Extravaganza will be at 2:30 p.m. Feb. 25 at the Von Braun Center. Admission is \$20. For tickets, call 880-2854.

### **Training**

#### ***Cooperative agreements class***

There will be a cooperative agreements class conducted by Phil Taylor from 8 a.m.-4 p.m. Feb. 28 in Bldg. 4200, room G-13-C. This is the only time this class will be taught this year. Registration is via AdminSTAR.

#### ***Think like da Vinci seminar***

A live seminar — How to Think Like Leonardo da Vinci: Liberating Creativity and Igniting Innovation in the Workplace — will air at noon Feb. 22 in Bldg. 4200, room G13-G or any television that receives Marshall Channel 14. Michael Gelb has a seven-step program that teaches people to "think like da Vinci." To register, e-mail your full name and phone number to [edtec@msfc.nasa.gov](mailto:edtec@msfc.nasa.gov).

#### ***Measurement systems class***

The Tustin Technical Institute will present, "Instrumentation For Electrical Test And Measurement," Feb. 26-28 at the Marshall Center. The course provides a basic understanding of electrical measurement systems. Enroll via AdminSTAR. For more information, call Ela Washington at 544-1164.

#### ***Contracting professionals seminar***

The National Contract Management Association will present, "NES 2001, 'The Contracting Professional as a Risk Manager,'" March 1, at Trinity United Methodist Church. This seminar is designed to enhance contracting professionals' understanding of the big picture. Register on the Web at: <http://www.ncmahsv.org>

#### ***Metalcasting workshop***

A rapid prototyping and tooling for metalcasting workshop will be held April 5-6 at the Beville Center. For more information, call (843) 760-3219 or visit the Web at: [http://amc.aticorp.org/RP\\_Workshop/overview.html](http://amc.aticorp.org/RP_Workshop/overview.html)

## Employee Ads

## Miscellaneous

- ★ Boy's 20" Raleigh bike with mongoose seat and rear pegs, blue, \$25. 533-5942
- ★ Black and Decker circular saw, 2.5HP, 7-1/4", \$20; Black and Decker electric air pump, \$20. 895-6722
- ★ Taurus PT-100, 40 S&W, blue, with Hogue grips, with extra mag., \$330. 379-3606
- ★ PC items: Turbo-tax 2000, \$10; Close Combat, Imperialism2, Diablo, Abomination, \$5 each; Game-pad Pro, \$7. 828-9651
- ★ Baby jogger stroller, \$80, new garment bag, \$10, 14 moving pads, \$20. 961-7890
- ★ 1995 Champion bass boat, 135 Mercury, \$9,500. 751-0130
- ★ Denon AVR-2500 audio/visual receiver, 85 watts per channel, in box, \$300. 461-6337
- ★ Matched set of Powerbilt Citation golf clubs; 3 metal woods, 3 PW irons, \$350. 881-8879
- ★ MTD Tiller, rear tine, 5HP, \$500 firm. 256-586-7424
- ★ Aquarium, 50 gallon, 3 pumps/filters, accessories, stand, fish, \$150; large satellite dish, amplifier, cables, make offer. 534-2839
- ★ South Bend lathe, 9" swing, 4' bed, thread cutting, power feed, with bench, \$550. 232-1171
- ★ Conn alto saxophone, \$500 obo; Soloflex/complete, \$500 obo.; Jon boat, \$200 obo. 653-3625
- ★ Heavy duty boat to shore power cord w/pig tail, 50', \$100; large chart books of TN/TOM and TN river waterway, \$30 ea./\$50 both. 881-9421
- ★ Galloping Gourmet Perfection Air oven, new, countertop glass unit, self-cleaning, \$50. 931-433-0004
- ★ Irish Setter puppies, FDSB/AKC registered, field bred, \$350 males, \$400 females. 423-5425
- ★ Bauer ice hockey skates, youth size 2, \$25; CCM ice hockey skates, size 13, \$25. 533-5942
- ★ This-End-Up furniture: corner shelves, \$90, sofa tables, \$75, children's chairs, \$25. 534-7981
- ★ Sheltie puppies; 2 males, 7 weeks old, AKC registered, first shots, de-wormed, dew claws removed. 461-9662
- ★ Mahogany desk, \$100; walnut desk, \$100; girl's bike, \$40; punch bowl with cups, \$40. 881-9404
- ★ Apple 6100 computer system w/printer, \$200; 4 piece desk set, \$50; office chair, \$50. 828-6213
- ★ Kenwood TS-850 amateur HF radio, \$900 obo. 881-0533
- ★ Schwinn bikes: men's 12-speed World Sport, \$35; women's 10-speed Suburban, \$35; new tires. 881-4028

## Vehicles

- ★ 1998 Honda Accord EX sedan, green, auto, new tires, one owner, non-smoker, 46K miles, \$14,700. 881-9233
- ★ 1991 Cougar, V-6, auto, all-power, leather, cruise, digital dash, cassette, 128K miles, \$3,850. 539-3166
- ★ 1989 Suburban, 4x4, 350 V-8, blue/gray, 156K miles, \$6,900. 551-2933
- ★ 1990 Dodge Dakota Sport, extended cab, V-6, needs paint and minor body work, \$1,500. 337-7791/256-498-3229
- ★ 1974 Pontiac GTO, PS, air. 353-7371
- ★ 1993 Toyota Camry LE, sedan, V-6, auto, all-power, gold pkg., cruise, new tires, non-smoker, 150K miles, \$5,400. 538-6744
- ★ 1994 Honda Accord EX, sunroof, automatic, leather, white exterior, 18K miles, \$11,000. 650-0810
- ★ 1995 Ford Contour GL, 100K miles, \$3,500. 881-0786
- ★ 1989 Buick Park Avenue, 127K miles, all-power, \$3,950. 534-7791/656-8676
- ★ 1996 Gulfstream Innsbruck travel trailer, 21', bath w/shower/tub, includes extras, \$7,900. 881-5093
- ★ 1996 Toyota Camry LE sedan, green, automatic, 73K miles, one-owner, new tires, \$9,400. 881-5093
- ★ 1993 Dodge Grand Caravan SE, one-owner, many new parts, service records available, \$5,200 obo. 895-9520
- ★ 1998 Ford Contour, burgundy/gray interior, 114K miles, auto, new tires and brakes, \$4,700. 797-7251

## Wanted

- ★ Motorized treadmill in good working order w/wider than 15" belt, reasonably priced. 256-0753-2278
- ★ Twin bunk beds w/mattresses, metal, in good condition. 464-3988
- ★ Go-kart, min. 5HP engine, good condition or fixer upper, prefer single seat. 837-1569
- ★ Late model travel trailer, 26', preferably w/slide out. 351-1204
- ★ Little Tykes twin racecar bed. 961-9441

## Found

- ★ Ladies earrings, 1 pair, beside Bldg. 4203. Call 544-7686 to claim/identify
- ★ Computer mouse, beside Bldg. 4610. Call 544-7686 to claim/identify

## Free

- ★ Two male rabbits, half Angora, half Lop-Ear, 1 yr. old, hutch habitat included. 828-9651
- ★ Tomato cages. 881-6595

## Thank you

I would like to thank everyone for their kind words, prayers, visits, food, flowers, cards and continuous support offered to me since the death of my mother, Mrs. Rodell Fletcher. Your thoughtfulness will not be forgotten, and please know that my family and I have been touched by your kindness. Again, I say thanks, and your support is greatly appreciated. Please continue to pray for my family during this time.

Sincerely,  
Jackie Pates, AD33

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